

SEQUENCE LISTING

<110> ZHONG, Pingyu et al.

<120> COMPOSITIONS AND METHODS FOR GENERATING
CHIMERIC HETEROMULTIMERS

<130> 13403.0004.NPUS00

<140> To Be Assigned

<141>

<160> 30

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 146

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(132)

<400> 1

tct	aga	ggt	gga	gga	ggt	gag	gag	aag	tcc	cgg	ctg	ttg	gag	aag	gag	48
Ser	Arg	Gly	Gly	Gly	Gly	Glu	Glu	Lys	Ser	Arg	Leu	Leu	Glu	Lys	Glu	
1			5					10					15			

aac	cgt	gaa	ctg	gaa	aag	atc	att	gct	gag	aaa	gag	gag	cgt	gtc	tct	96
Asn	Arg	Glu	Leu	Glu	Lys	Ile	Ile	Ala	Glu	Lys	Glu	Glu	Arg	Val	Ser	
		20						25				30				

gaa	ctg	cgc	cat	caa	ctc	cag	tct	gta	gga	ggt	tgt	taatagggcg	142
Glu	Leu	Arg	His	Gln	Leu	Gln	Ser	Val	Gly	Gly	Cys		
	35						40						

cgcc	146
------	-----

<210> 2

<211> 44

<212> PRT

<213> Homo sapiens

<400> 2

Ser	Arg	Gly	Gly	Gly	Gly	Glu	Glu	Lys	Ser	Arg	Leu	Leu	Glu	Lys	Glu
1			5					10					15		
Asn	Arg	Glu	Leu	Glu	Lys	Ile	Ile	Ala	Glu	Lys	Glu	Glu	Arg	Val	Ser
		20						25				30			
Glu	Leu	Arg	His	Gln	Leu	Gln	Ser	Val	Gly	Gly	Cys				
	35						40								

<210> 3

<211> 140
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(140)

<400> 3
 tct cga gga ggt ggt gga aca tcc cgc ctg gag ggc cta cag tca gaa 48
 Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu Gly Leu Gln Ser Glu
 1 5 10 15
 aac cat cgc ctg cga atg aag atc aca gag ctg gat aaa gac ttg gaa 96
 Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp Lys Asp Leu Glu
 20 25 30
 gag gtc acc atg cag ctg cag gac gtc gga ggt tgc gcg gcc gc 140
 Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys Ala Ala
 35 40 45

<210> 4
 <211> 46
 <212> PRT
 <213> Homo sapiens

<400> 4
 Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu Gly Leu Gln Ser Glu
 1 5 10 15
 His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp Lys Asp Leu Glu Glu
 20 25 30
 Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys Ala Ala Ala
 35 40 45

<210> 5
 <211> 203
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Bluescript vector

<400> 5
 aat tgt gag cgg ata aca att tac cgg ttc ttt taa ctt tag taa gga 48
 gga att aaa aaa tga aaa agt ctt tag tcc tca aag cct ccg tag ccg 96
 ttg cta ccc tcg ttc cga tgc taa gct tcg ctt cta gag cgg ccg ctt 144
 atc cat acg acg tac cag act acg cag gag gtc atc acc atc atc acc 192
 att aga gat ct 203

<210> 6
 <211> 45
 <212> PRT
 <213> Artificial Sequence

<220>

09921144.080101

<223> Bluescript

<400> 6

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15
Val Pro Met Leu Ser Phe Ala Ser Arg Ala Ala Ala Tyr Pro Tyr Asp
20 25 30
Val Pro Asp Tyr Ala Gly Gly His His His His His His
35 40 45

<210> 7

<211> 212

<212> DNA

<213> Artificial Sequence

<220>

<223> Bluescript vector

<400> 7

aat tgt gag cgg ata aca att tac cgg ttc ttt taa ctt tag taa gga 48
gga att aaa aaa tga aat acc tat tgc cta cgg cag ccg ctg gat tgt 96
tat tac tcg cgg ccc agc cgg cca tgg cgg ccc tgc agg cct cta gag 144
cgg ccg ctt atc cat acg acg tac cag act acg cag gag gtc atc acc 192
atc atc acc att aga gat ct 212

<210> 8

<211> 48

<212> PRT

<213> Artificial Sequence

<220>

<223> Bluescript

<400> 8

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
1 5 10 15
Ala Gln Pro Ala Met Ala Ala Leu Gln Ala Ser Arg Ala Ala Ala Tyr
20 25 30
Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly His His His His His His
35 40 45

<210> 9

<211> 272

<212> DNA

<213> Artificial Sequence

<220>

<223> Bluescript vector

<400> 9

aat tgt gag cgg ata aca att tac cgg ttc ttt taa ctt tag taa gga 48
gga att aaa aaa tga aaa agt ctt tag tcc tca aag cct ccg tag ccg 96
ttg cta ccc tcg ttc cga tgc taa gct tcg ctt cta gag cgg ccg ctt 144
atc cat acg acg tac cag act acg cag gag gtc atc acc atc atc acc 192
att aga gat ctg gag gcg gta ctg ttg aaa gtt gtt tag caa aa 236
g cta aca tac tgc gta ata agg agt ctt aag tcg ac 272

<210> 10
 <211> 67
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> BlueScript vector

<400> 10
 Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
 1 5 10 15
 Val Pro Met Leu Ser Phe Ala Ser Arg Ala Ala Ala Tyr Pro Tyr Asp
 20 25 30
 Val Pro Asp Tyr Ala Gly Gly His His His His His Arg Ser Gly
 35 40 45
 Gly Gly Thr Val Glu Ser Cys Leu Ala Lys Ala Asn Ile Leu Arg Asn
 50 55 60
 Lys Glu Ser
 65

<210> 11
 <211> 281
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Bluescript vector

<400> 11
 aat tgt gag cgg ata aca att tac cgg ttc ttt taa ctt tag taa gga 48
 gga att aaa aaa tga aat acc tat tgc cta cgg cag ccg ctg gat tgt 96
 tat tac tcg cgg ccc agc cgg cca tgg cgg ccc tgc agg cct cta gag 144
 cgg ccg ctt atc cat acg acg tac cag act acg cag gag gtc atc acc 192
 atc atc acc att aga gat ctg gag gcg gta ctg ttg aaa gtt gtt tag 240
 caa a ag cta aca tac tgc gta ata agg agt ctt aag tcg ac 281

<210> 12
 <211> 70
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Bluescript vector

<400> 12
 Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
 1 5 10 15
 Ala Gln Pro Ala Met Ala Ala Leu Gln Ala Ser Arg Ala Ala Tyr
 20 25 30
 Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly His His His His His
 35 40 45
 Arg Ser Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys Ala Asn Ile
 50 55 60
 Leu Arg Asn Lys Glu Ser
 65 70

<210> 13

<211> 501
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)...(501)
 <223> Bluescript vector

<400> 13

atg aaa aag tct tta gtc ctc aaa gcc tcc gta gcc gtt gct acc ctc	48
Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu	
1 5 10 15	
ggt ccg atg cta agc ttc gct tct aga ggt gga gga ggt gag gag aag	96
Val Pro Met Leu Ser Phe Ala Ser Arg Gly Gly Gly Gly Glu Glu Lys	
20 25 30	
tcc cgg ctg ttg gag aag gag aac cgt gaa ctg gaa aag atc att gct	144
Ser Arg Leu Leu Glu Lys Glu Asn Arg Glu Leu Glu Lys Ile Ile Ala	
35 40 45	
gag aaa gag gag cgt gtc tct gaa ctg cgc cat caa ctc cag tct gta	192
Glu Lys Glu Glu Arg Val Ser Glu Leu Arg His Gln Leu Gln Ser Val	
50 55 60	
gga ggt tgt taa tag ggc gcg cca caa ttt cac agt aag gag gtt taa	240
Gly Gly Cys * * Gly Ala Pro Gln Phe His Ser Lys Glu Val *	
65 70 75	
ctt atg aaa aaa tta tta ttc gca att cct tta gtt gtt cct ttc tat	288
Leu Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr	
80 85 90	
tct cac tcc gct acg cgt tct cga gga ggt ggt gga aca tcc cgc ctg	336
Ser His Ser Ala Thr Arg Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu	
95 100 105	
gag ggc cta cag tca gaa aac cat cgc ctg cga atg aag atc aca gag	384
Glu Gly Leu Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu	
110 115 120 125	
ctg gat aaa gac ttg gaa gag gtc acc atg cag ctg cag gac gtc gga	432
Leu Asp Lys Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly	
130 135 140	
ggt tgc gcg gcc gct tat cca tac gac gta cca gac tac gca gga ggt	480
Gly Cys Ala Ala Ala Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly	
145 150 155	
cat cac cat cat cac cat tag	501
His His His His His His *	
160	

<210> 14
 <211> 163

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Bluescript vector

<400> 14

```

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
 1           5           10           15
Val Pro Met Leu Ser Phe Ala Ser Arg Gly Gly Gly Glu Glu Lys
      20           25           30
Ser Arg Leu Leu Glu Lys Glu Asn Arg Glu Leu Glu Lys Ile Ile Ala
      35           40           45
Glu Lys Glu Glu Arg Val Ser Glu Leu Arg His Gln Leu Gln Ser Val
      50           55           60
Gly Gly Cys Gly Ala Pro Gln Phe His Ser Lys Glu Val Leu Met Lys
      65           70           75           80
Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser His Ser
      85           90           95
Ala Thr Arg Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu Gly Leu
      100          105          110
Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp Lys
      115          120          125
Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys Ala
      130          135          140
Ala Ala Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly His His His
      145          150          155          160
His His His
  
```

<210> 15
 <211> 498
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)...(498)
 <223> Bluescript vector

<400> 15

```

atg aaa tac cta ttg cct acg gca gcc gct gga ttg tta tta ctc gcg      48
Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
 1           5           10           15

gcc cag ccg gcc atg gcg tct aga ggt gga gga ggt gag gag aag tcc      96
Ala Gln Pro Ala Met Ala Ser Arg Gly Gly Gly Gly Glu Glu Lys Ser
      20           25           30

cgg ctg ttg gag aag gag aac cgt gaa ctg gaa aag atc att gct gag      144
Arg Leu Leu Glu Lys Glu Asn Arg Glu Leu Glu Lys Ile Ile Ala Glu
      35           40           45

aaa gag gag cgt gtc tct gaa ctg cgc cat caa ctc cag tct gta gga      192
Lys Glu Glu Arg Val Ser Glu Leu Arg His Gln Leu Gln Ser Val Gly
      50           55           60
  
```

ggt tgt taa tag ggc gcg cca caa ttt cac agt aag gag gtt taa ctt	240
Gly Cys * * Gly Ala Pro Gln Phe His Ser Lys Glu Val * Leu	
65 70 75	
atg aaa aaa tta tta ttc gca att cct tta gtt gtt cct ttc tat tct	288
Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser	
80 85 90	
cac tcc gct acg cgt tct cga gga ggt ggt gga aca tcc cgc ctg gag	336
His Ser Ala Thr Arg Ser Arg Gly Gly Gly Thr Ser Arg Leu Glu	
95 100 105	
ggc cta cag tca gaa aac cat cgc ctg cga atg aag atc aca gag ctg	384
Gly Leu Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu	
110 115 120 125	
gat aaa gac ttg gaa gag gtc acc atg cag ctg cag gac gtc gga ggt	432
Asp Lys Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly	
130 135 140	
tgc gcg gcc gct tat cca tac gac gta cca gac tac gca gga ggt cat	480
Cys Ala Ala Ala Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly His	
145 150 155	
cac cat cat cac cat tag	498
His His His His His *	
160	
<210> 16	
<211> 162	
<212> PRT	
<213> Artificial Sequence	
<220>	
<223> Bluescript vector	
<400> 16	
Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala	
1 5 10 15	
Ala Gln Pro Ala Met Ala Ser Arg Gly Gly Gly Gly Glu Glu Lys Ser	
20 25 30	
Arg Leu Leu Glu Lys Glu Asn Arg Glu Leu Glu Lys Ile Ile Ala Glu	
35 40 45	
Lys Glu Glu Arg Val Ser Glu Leu Arg His Gln Leu Gln Ser Val Gly	
50 55 60	
Gly Cys Gly Ala Pro Gln Phe His Ser Lys Glu Val Leu Met Lys Lys	
65 70 75 80	
Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser His Ser Ala	
85 90 95	
Thr Arg Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu Gly Leu Gln	
100 105 110	
Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp Lys Asp	
115 120 125	
Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys Ala Ala	
130 135 140	
Ala Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly His His His His	

060101

```
<220>  
<221> CDS  
<222> (1)...(543)  
<223> Bluescript vector
```

8

160

165

170

cgt aat aag gag tct taagtcgac
 Arg Asn Lys Glu Ser
 175

552

<210> 18
 <211> 185
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Bluescript vector

<400> 18
 Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
 1 5 10 15
 Val Pro Met Leu Ser Phe Ala Ser Arg Gly Gly Gly Gly Glu Glu Lys
 20 25 30
 Ser Arg Leu Leu Glu Lys Glu Asn Arg Glu Leu Glu Lys Ile Ile Ala
 35 40 45
 Glu Lys Glu Glu Arg Val Ser Glu Leu Arg His Gln Leu Gln Ser Val
 50 55 60
 Gly Gly Cys Gly Ala Pro Gln Phe His Ser Lys Glu Val Leu Met Lys
 65 70 75 80
 Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser His Ser
 85 90 95
 Ala Thr Arg Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu Gly Leu
 100 105 110
 Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp Lys
 115 120 125
 Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys Ala
 130 135 140
 Ala Ala Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly His His His
 145 150 155 160
 His His His Arg Ser Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys
 165 170 175
 Ala Asn Ile Leu Arg Asn Lys Glu Ser
 180 185

<210> 19
 <211> 549
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)...(540)
 <223> Bluescript vector

<400> 19
 atg aaa tac cta ttg cct acg gca gcc gct gga ttg tta tta ctc gcg
 Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
 1 5 10 15
 gcc cag ccg gcc atg gcg tct aga ggt gga gga ggt gag gag aag tcc

48

96

030101-447700T

Ala Gln Pro Ala Met Ala Ser Arg Gly Gly Gly Gly Glu Glu Lys Ser	
20 25 30	
cgg ctg ttg gag aag gag aac cgt gaa ctg gaa aag atc att gct gag	144
Arg Leu Leu Glu Lys Glu Asn Arg Glu Leu Glu Lys Ile Ile Ala Glu	
35 40 45	
aaa gag gag cgt gtc tct gaa ctg cgc cat caa ctc cag tct gta gga	192
Lys Glu Glu Arg Val Ser Glu Leu Arg His Gln Leu Gln Ser Val Gly	
50 55 60	
ggt tgt taa tag ggc gcg cca caa ttt cac agt aag gag gtt taa ctt	240
Gly Cys * * Gly Ala Pro Gln Phe His Ser Lys Glu Val * Leu	
65 70 75	
atg aaa aaa tta tta ttc gca att cct tta gtt gtt cct ttc tat tct	288
Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser	
80 85 90	
cac tcc gct acg cgt tct cga gga ggt ggt gga aca tcc cgc ctg gag	336
His Ser Ala Thr Arg Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu	
95 100 105	
ggc cta cag tca gaa aac cat cgc ctg cga atg aag atc aca gag ctg	384
Gly Leu Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu	
110 115 120 125	
gat aaa gac ttg gaa gag gtc acc atg cag ctg cag gac gtc gga ggt	432
Asp Lys Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly	
130 135 140	
tgc gcg gcc gct tat cca tac gac gta cca gac tac gca gga ggt cat	480
Cys Ala Ala Ala Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly His	
145 150 155	
cac cat cat cac cat tag gga ggc ggt act gtt gaa agt tgt ctg cgt	528
His His His His His * Gly Gly Gly Thr Val Glu Ser Cys Leu Arg	
160 165 170	
aat aag gag tct taagtcgac	549
Asn Lys Glu Ser	
175	

<210> 20
 <211> 184
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Bluescript vector

<400> 20
 Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Ala
 1 5 10 15
 Ala Gln Pro Ala Met Ala Ser Arg Gly Gly Gly Gly Glu Glu Lys Ser
 20 25 30

Arg Leu Leu Glu Lys Glu Asn Arg Glu Leu Glu Lys Ile Ile Ala Glu
 35 40 45
 Lys Glu Glu Arg Val Ser Glu Leu Arg His Gln Leu Gln Ser Val Gly
 50 55 60
 Gly Cys Gly Ala Pro Gln Phe His Ser Lys Glu Val Leu Met Lys Lys
 65 70 75 80
 Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser His Ser Ala
 85 90 95
 Thr Arg Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu Gly Leu Gln
 100 105 110
 Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp Lys Asp
 115 120 125
 Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys Ala Ala
 130 135 140
 Ala Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Gly His His His His
 145 150 155 160
 His His Arg Ser Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys Ala
 165 170 175
 Asn Ile Leu Arg Asn Lys Glu Ser
 180

<210> 21
 <211> 55
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 21
 ggaattgtga gcggataaca atttaccggt cacacaggaa acagctatga ccatg 55

<210> 22
 <211> 55
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 22
 catggtcata gctgtttcct gtgtgaccgg taaattgtta tccgctcaca attcc 55

<210> 23
 <211> 9
 <212> DNA
 <213> Viral

<400> 23
 ttaacttta 9

<210> 24
 <211> 8
 <212> DNA
 <213> Viral

<400> 24

taaggagg

8

<210> 25

<211> 68

<212> DNA

<213> Viral

<400> 25

atgaaaaagt ctttagtcct caaagcctcc gtagccgttg ctccctcggt cccatgctaa
gcttcgct

60

68

<210> 26

<211> 66

<212> DNA

<213> Viral

<400> 26

atgaaatacc tattgcctac ggcagccgct ggattgttat tactcgcggc ccagccggcc
atggcg

60

66

<210> 27

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<223> Phage

<400> 27

tatccatacg acgtaccaga ctacgcagga ggatcatcacc atcatcacca ttag

54

<210> 28

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Phage

<400> 28

atgaaaaaat tattatctgc aattccttta gttgttcctt tctattctca ctccgct

57

<210> 29

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Bluescript

<400> 29

Val Gly Gly Cys

1

<210> 30

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Bluescript

<400> 30

Gly Gly Gly Gly

1

092144-030101